

CLAIMS

What is claimed is:

1. A method, comprising:
imprinting a stamper into an embossable film at an imprinting temperature,
the embossable film disposed over a base structure; and
separating the stamper from the embossable film at approximately the
imprinting temperature.
2. The method of claim 1, wherein the imprinting temperature is
approximately room temperature.
3. The method of claim 1, wherein the imprinting temperature is above room
temperature.
4. The method of claim 1, wherein the embossable film comprises a material
that does not have a glass transition temperature.
5. The method of claim 4, wherein the embossable film comprises a
thermosetting material.
6. The method of claim 4, further comprising selectively removing the
embossable film to form a pattern of areas above the base structure that do not
have the embossable film thereon.
7. The method of claim 4, further comprising disposing a magnetic layer
above the base structure in the areas that do not have the embossable film.
8. A method, comprising:
transporting a base structure having an embossable film to a stamper;

heating the stamper and the embossable film;
imprinting the stamper into the embossable film;
separating the stamper from the embossable film; and
cooling the embossable film after the separating.

9. The method of claim 8, wherein transporting further comprises handling the base structure with a Bernoulli pick-up head.
10. The method of claim 9, wherein transporting further comprises preheating the embossable film to an approximate embossing temperature with a gas from the Bernoulli pick-up head.
11. The method of claim 8, wherein the stamper and the embossable film are heated to a temperature at least that of a glass transition temperature of the embossable film.
12. The method of claim 8, wherein imprinting the stamper into the embossable film comprises imprinting the stamper into the embossable film to produce a pattern of trenches areas and plateau areas.
13. The method of claim 8, further comprising disposing the embossable film above the base structure prior to the heating, wherein the base structure comprises a substrate.
14. The method of claim 13, further comprising selectively removing the embossable film to form a pattern of areas above the base structure that do not have the embossable film thereon.

15. The method of claim 14, further comprising disposing a magnetic layer above the base structure in the areas that do not have the embossable film.
16. The method of claim 14, further comprising etching the base structure using the patterned embossable film.
17. The method of claim 8, wherein heating the stamper and the embossable film comprises separately heating the stamper and the embossable film using the Bernoulli pick-up head.
18. The method of claim 17, wherein the stamper and the embossable film are separately heated to an imprint temperature at least that of a glass transition temperature of the embossable film.
19. The method of claim 18, further comprising placing the embossable film in close proximity to the stamper while the embossable film is approximately at the imprint temperature.
20. The method of claim 17, wherein the stamper is heated to a first temperature at least that of a glass transition temperature of the embossable film and wherein the embossable film is separately heated to a second temperature below that of the first temperature.
21. The method of claim 20, further comprising further heating the embossable film to the first temperature.

22. The method of claim 17, wherein the stamper is heated to a first temperature at least that of a glass transition temperature of the embossable film and wherein the embossable film is separately heated to a second temperature above that of the first temperature.

23. An apparatus, comprising:
means for imprinting a stamper into an embossable film at an imprinting temperature, the embossable film disposed over a base structure; and
means for separating the stamper from the embossable film at approximately the imprinting temperature.

24. The apparatus of claim 23, further comprising means for selectively removing the embossable film to form a pattern of areas above the base structure that do not have the embossable film thereon, wherein the embossable film comprises a material that does not have a glass transition temperature.

25. The apparatus of claim 23, further comprising means for transporting the base structure to the stamper.

26. The apparatus of claim 23, wherein imprinting further comprises means for heating the stamper and the embossable film to approximately the imprinting temperature.